

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Revision of Parts 2 and 15 of the Commission’s) ET Docket No. 03-122
Rules to Permit Unlicensed National) RM - 10371
Information Infrastructure (U-NII) devices in)
the 5 GHz band)
)

Via the ECFS

REPLY COMMENTS OF IEEE 802.18

IEEE 802.18 the Radio Regulatory Technical Advisory Group (the “RR-TAG”) in IEEE 802¹ hereby respectfully offers its Reply Comments on the Notice of Proposed Rulemaking (the “NPRM”) in the above-captioned Proceeding.²

IEEE 802, as a leading consensus-based industry standards body, produces standards for wireless networking devices, including wireless local area networks (“WLANs”), wireless personal area networks (“WPANs”), and wireless metropolitan area networks (“Wireless MANs”).

This document was prepared by the RR-TAG and approved by the RR-TAG, the IEEE 802.11 WG, and the IEEE 802.15 WG.

IEEE 802.18 and the referenced working groups are interested parties in this Proceeding and we appreciate the opportunity to provide these comments to the Commission.

¹ The IEEE Local and Metropolitan Area Networks Standards Committee (“IEEE 802” or the “LMSC”)

² This document represents the views of the IEEE 802.18 and the referenced working groups. It does not necessarily represent the views of the IEEE as a whole or the IEEE Standards Association as a whole.

INTRODUCTION

1. IEEE 802.18 and the referenced Working Groups commend the Commission for adopting the instant NPRM, proposing to make the band 5470-5725 MHz available for use by wireless access systems, including RLANs, in the U.S.
2. We note that the overwhelming majority of comments filed in this proceeding generally support the Commission's proposals, with a few parties suggesting that the Commission adopt slightly different technical parameters in some areas. We will address some of these differing views below.

COMMENTS SEEKING EIRP LEVELS IN EXCESS OF THE LIMITS ESTABLISHED IN THE NEWLY-MODIFIED ITU RADIO REGULATIONS SHOULD BE REJECTED

3. We note that several companies that appear to specialize in providing (generally proprietary, not standards-based) equipment to WISPs and other providers of wireless broadband services that seek to blanket large areas ask the Commission to adopt rules that allow more than the 1W EIRP proposed in the NPRM.
4. However, the ITU Radio Regulations, as modified by Resolution 229 [temporarily designated COM5/16] (WRC-03), impose a hard limit of 1W EIRP with no provision for exceptions.³
5. We urge the Commission to avoid upsetting the delicate balance that was struck (and supported by extensive sharing studies) by rejecting these requests for higher EIRPs than are permitted under the ITU Radio Regulations, noting that the U-NII band above 5725 MHz is not encumbered with a hard and fast limit of 1W EIRP in the ITU Radio Regulations as are the 5250-5350 MHz and 5470-5725 MHz bands under consideration in the instant Proceeding.
6. Furthermore, since the ITU Radio Regulations have the force of a treaty obligation between nations, the Commission is not free to simply ignore those obligations for the convenience of a few that wish to do something that is counter to the provisions of the ITU Radio Regulations.

³ The 1W EIRP limit was agreed internationally at WRC-03 because that was the highest EIRP considered in sharing studies and, furthermore, NTIA and the US Department of Defense believe that this limit is necessary to protect critical government radar systems. This limit was part of a very delicately crafted compromise between those from industry who chose to participate in the ITU-R sharing studies, NTIA, DoD, and the Commission that enabled the US government as a whole to adopt a position in support of the globally harmonized allocation of the 5150-5350 and 5470-5725 MHz bands for wireless access systems, including RLANs.

**COMMENTS SUGGESTING THAT THE REQUIREMENTS FOR DYNAMIC
FREQUENCY SELECTION AND/OR TRANSMIT POWER CONTROL SHOULD NOT
BE REQUIRED SHOULD ALSO BE REJECTED**

7. Likewise, the requirements imposed in the ITU Radio Regulations for Dynamic Frequency Selection (“DFS”) and Transmit Power Control (“TPC”) in the bands 5250-5350 MHz and 5470-5725 MHz are a non-waivable obligation that the United States agreed to at WRC-03. The allocation of the subject bands was made on the basis of these requirements being in place to protect incumbent services.

8. Therefore, all of the various suggestions that DFS and/or TPC requirements not be applied to those bands should be rejected by the Commission.

**THE COMMISSION SHOULD ENDEAVOR TO IDENTIFY ADDITIONAL
SPECTRUM FOR HIGH POWER OUTDOOR POINT-POINT AND POINT-
MULTIPOINT BROADBAND DISTRIBUTION**

9. While we understand that the Commission is bound by the ITU Radio Regulations regarding the bands under consideration in the instant Proceeding, we (consistent with our previously filed comments) share the concerns of the License-Exempt Alliance (LEA) regarding the Commission's assumption of the adequacy of the 100 MHz at 5.725-5.825 MHz for higher-power outdoor operations. While "out of scope" in the instant Proceeding, we encourage the Commission to remain committed to finding ways to provide increased capacity for such services through another proceeding.

**CLAIMS AND COMPLAINTS FROM THE AMATEUR COMMUNITY ALLEGING
INTERFERENCE AND HARM TO THE AMATEUR COMMUNITY FROM THE
COMMISSION'S PROPOSALS ARE UNFOUNDED**

10. We note in particular that the comments of American Radio Relay League (“ARRL”) appear to attempt to give the impression of “supporting” the Commission’s proposal, and accepting the reality that “... *the debate has, from a regulatory perspective, essentially been settled at the 2003 World Radiocommunication Conference (WRC-03), which allocated the band 5.47-5.725 GHz to the mobile service for implementation of wireless access systems (WAS) including RLANs, subject to the provisions of Resolution 229 [temporarily designated COM5/16] (WRC-03).*”

11. However, ARRL’s “support” is offered in such a grudging manner, buried in a litany of how “*The Amateur Allocation at 5.650-5.925 GHz Has Been Subject to ‘Death by a Thousand Cuts’*”; “*Amateur Radio has been disaccommodated on a continuing basis in the 5.650-5.925 GHz band domestically in the past six years.*”; “... *the Notice gives short shrift to incumbent Amateur uses of the 5.650-5.725 GHz band ...*”; etc., to the point of melodrama.

12. ARRL also makes a number of vague and unsubstantiated claims that Part 15 operations, both in the 2.4 GHz band and in the 5 GHz band have somehow “*compromised*” amateur radio operation “*in many urbanized and suburban environments.*”

13. These unsubstantiated claims of significant “harm” to the amateur community don’t hold water, given the demonstrably light use of the bands above 450 MHz by the amateur community.

14. Interestingly, in an effort to promote amateur use of the lightly used 2.4 GHz amateur allocation, the ARRL itself is actively promoting amateur use of IEEE 802.11b and IEEE 802.11g equipment under Part 97 of the Commission’s rules in the segment of the 2.4 GHz band that is shared with Part 15.

GIVEN THAT WRC-03 MADE A PRIMARY ALLOCATION TO THE MOBILE SERVICE FOR WAS/RLAN SYSTEMS AND THE UNDERUTILIZATION OF THE 5 GHZ BAND BY THE AMATEUR COMMUNITY, THE COMMISSION SHOULD RECONSIDER THE RELATIVE STATUS OF THE SERVICES

15. ARRL asserts that studies should be undertaken to “(1) assess the potential aggregate interference from 802.11a devices to an amateur space station receiver and (2) if necessary, explore mitigation techniques for the band 5.65-5.67 GHz.”, presumably with the intent of attempting to force wireless access systems, including RLANs, to adopt some mitigation techniques specifically to protect the Amateur Radio Service and/or the Amateur Satellite service.

16. Even if the amateur community had a satellite with an uplink receiver in this band, *which, to the best of our knowledge it does not*, to assert that the speculative future needs of the very small number of amateur operators that operate in this band, or are likely to do so in the future, should outweigh the clear and tangible needs of many tens of millions of users of wireless access systems, including RLANs, would be contrary to the public interest.

17. While industry is committed to being a responsible sharing partner in shared bands, any suggested requirement that many tens of millions of users bear the cost of implementation of some yet to be defined mitigation technique designed to protect any conceivable mode that amateurs might decide to use (wisely or not from a technical perspective), would not be in the public interest and should be summarily rejected by the Commission.

18. While the Amateur Radio Service admittedly serves the public interest by providing robust emergency and disaster communications capabilities in times of need, it does not do so to any degree in the 5 GHz band, nor is it likely to ever do so. Amateur emergency operations are, virtually without exception, carried out in the HF, VHF, and low UHF bands.

19. Thus, it seems that the best use of the 5 GHz band by the amateur community might well be for high-speed networking. The amateur community could leverage the economies of scale of high performance wireless networking equipment designed by industry and both sides would benefit from a sharing perspective if amateurs were required to operate within the same technical constraints that were imposed on wireless access systems, including RLANs.

20. To standards-based wireless networking equipment, a network is a network. And, with DFS, TPC, and the features of the protocols employed, adjacent networks would be able to coexist quite handily, regardless of whether they were amateur networks or enterprise networks.

WE REITERATE OUR CONCERN ABOUT MAINTAINING THESE IMPORTANT APPLICATIONS, WITH SIGNIFICANT ECONOMIC AND SOCIETAL BENEFITS IN A “LESS THAN SECONDARY” REGULATORY STATUS

21. We note again that WRC-03 made a global PRIMARY allocation to the mobile service and in Europe and most of the world the Amateur Radio Service, as a secondary service, will be obligated to protect, and unable to claim protection from, wireless access systems, including RLANs in the shared band segment. To have this situation “upside-down” in the US, as the NPRM proposes, and ARRL would like, is counter to the public interest because of the huge economic and societal value the public will enjoy as a result of advancements in broadband wireless networking.

Respectfully submitted,

/s/

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